items Name	Specification	Total Qty

Clarification of Technical Queries of vendor(S) for the supply of Networking & Data Center Items

Lot No.1

Active Item: -

items Name	Specification	Total Qty
Layer 3, Core-Switch	Gigabit Ethernet L3 fixed configuration chassis in a 1U form factor with 44xGig SFP ports 4x10GE SFP+ ports L3 Lite routing: Static Routes, IPv4 and IPv6 and inter-VLAN Stackable Switch Dual power supply with SFP Modules With OEM SFP Modules (44x1G, 4x10G) ARP entries 128K or more, mac address 128K or more, IPv4 routes 128K or more Forwarding performance: 96 Mpps or More Switching capacity: 580 Gbit/s 1 year warranty/Support (US, European or Huawei brand only)	2
Layer 2 Manageable Switch, 24 Port	Access Switches with POE feature and having 24x10/100/1000 Ethernet PoE+ ports 4x1GE SFP+ ports Dual power supply Forwarding performance: 96 Mpps or more Switching capacity: 580 Gbit/s mac address 64K or more 1 year warranty/Support (US, European or Huawei brand only)	12
Layer 2 Switch 16 Port	16xPort Gigabit Non-Managed Network Switch 16 x 10/100/1000 Gigabit ports Switching Capacity: 32 Gbps or more mac address 32K or more Iron body Rack mountable Forwarding Rate: 23 Mpps or more Warranty 1 Year (US, European or Huawei brand only)	16
Layer 2 Switch, 8 Port	08xPort Gigabit Non-Managed Network Switch 08 x 10/100/1000 Gigabit ports Switching Capacity: 24 Gbps or more Forwarding Rate: 18 Mpps or more mac address 16K or more Iron body Rack mountable Warranty 1 Year (US, European or Huawei brand only)	18

Access Point	Wi-Fi Alliance-certified 802.11a/b/g/n/ac/ac wave 2/ax(Wifi6) Support for dual band and dual radio (concurrent) 4x4 MIMO with 4 spatial streams Minimum 1.75 Gbps aggregated wireless data rate, 550Mbps at 2.4G and 1.2Gbps at 5G High-Gain (4 dBi on 2.4GHz and 5 dBi on 5GHz) Dual-band integrated Omni-Directional antennas, built-in smart antennas, PoE power supply in compliance with 802.3at/af Support to eliminate sticky client behavior while roaming One 10/100/1000BASE-T Ethernet network interface (RJ-45) Auto-sensing link speed and MDI/MDX. 802.3at and 802.3az compliant Serial console interface (RJ-45 or USB or Bluetooth) LED indicates the power-on, startup, running, alarm, and fault states of the system. Ceiling/Wall mountable Minimum transmit power ==+25dBm or more on== 2.4 GHz and +27dBm on 5GHz Supported modulation types BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM for 802.11a/b/g/n/ac/ax USB interface can be used for external IoT expansion like ZigBee and RFID Support UL/DL OFDMA scheduling enables multiple users to receive and send information at the same time Support UL/DL MU-MIMO on both the 2.4 GHz and 5 GHz frequency bands, allowing an AP to transmit data to and receive data from multiple STAs simultaneously Maximum number of users is 512 or more The APs support WEP, WPA/WPA2-PSK, WPA3-SAE, WPA/WPA2-PPSK, WPA/WPA2/WPA3-802.1x, and WAPI 1 Years warranty. (US, European or Huawei brand only)	**81**
Wlan Controller	Support to manage 256 access points, 4K concurrent users, support 802.11ax(Wifi6), 802.11ac and 802.11n access points Support 2 x 10GE/GE optical interfaces and 8 x GE electrical interfaces The WLAN AC has a built-in Portal/AAA server and can provide Portal/802.1X authentication for users The WLAN AC has a built-in web system that is easy to configure and provides comprehensive monitoring and intelligent diagnosis Supports Layer 4 to Layer 7 application identification and can identify over 3000 applications Support OSPF, RIP, BGP, ISIS and PBR MAC address 6K or more, ipv4 routing entries 6K or more, arp entries 5K or more ==Access Controller AP Licenses Qty=128== 1 year warranty/support	**1**
Passive Items		
Item Name	**Description**	**Qty**

Cat 6 Cable	Network Cable: UTP Cable CAT6 305m box 100 Ω 4-Pair UTP Cable, 350 MHz UTP Category 6 cable Conductor resistance at 20° C (max.) 98,6 Ω/km Dielectric strength at 50 Hz 1 kV/1min Insulation resistance (min.) 5000 MΩ/km Velocity (nom.) 66%, Characteristic impedance 100 +/-15 Ω (1 to 100 MHz), Mutual capacitance (nom) <55 pF/m. Propagation delay skew <20 ns/100m Flammability Performances: Fire retardant IEC 60332-1 Halogen free (LSOH versions) IEC 60754-1 (3M, Schneider, baynet, Optronics or equivalent)CAT 6	34
42U Rack Box	42U Rack 600mmx1000mm 2x 32A/1Phase input, 12*C13, 4*C19, indication light, vertical mount Including frame, bottom panel, and side doors Warranty 1 Year (Branded)	2
4U Rack Box	Switch Box: 4U Iron Switch rack / Box wall mountable, Tripp Lite, 16.5" Deep.	31
9 U Rack Box	Switch Box: 9U Iron Switch rack / Box wall mountable, Tripp Lite, 16.5'' Deep.	12
6U Rack Box	Switch Box: 6U Iron Switch rack / Box wall mountable, Tripp Lite, 16.5'' Deep.	2
Face Plate	Network face plates: 3M or equivalent, Face plates single with back-box and single I/O insert (STP). Full set	320
RJ-45 Connector	RJ-45 Cat 6 Connector, Full copper conductor High quality 50-micron gold contacts Meets or exceeds Category 6 EIA/TIA 568 a-B,2RoHS compliant for 23AWG - 24AWG Wires (3M, AMP, Black Copper or equivalent)	950

(Lot No.02)

	Fiber Optic	
Item Name	**Specs**	**QTY**
ODF 12 Core	Fiber ODF 12 core/nodes (Rack mount) with interface connectors, SC to LC complete in all respect	20
ODF 48 Core	Fiber ODF 48 core/nodes (Rack mounted) Single Mode with interface connectors	2
Media Converter	Media Converter, 1000Base-T UTP to 1000Base-LX SM SC Gigabit Fiber Media Converter (Up to 10km), Single Mode, Single Fiber, Fiber to Copper conversion, D Link or Equivalent	3
SFP Modules	Fiber SFP Modules / Transceivers 1 Gigabit Fiber SFP Modules / Transceivers For Single Mode fiber Compatible with Cisco L2/L3 switches	40
Patch Card	Fiber Patch cord SC to LC, Single Mode, 3-meter duplex	50
Patch Card	Fiber Patch cord SC to SC, Single Mode, 3-meter duplex	10

Fiber Splicing	Fiber pigtail cable Single mode with Splicing and ODF setting	200
Fiber Optic Cable	Back Bone Passive (Media), Fiber Optic 12 Core Single mode Armored in meter	600
Fiber Optic Cable	Back Bone Passive (Media), Fiber Optic 48 Core Single mode Armored in meter	3500
Digging	Digging, Piping, Main holes, Warning Tape etc for fiber cable laying As per Industry Standard	2000

(Lot No.03)

Firewall		
Item Name	**Specification**	**Qty**
Network Firewall with UTM (US or European Brands only)	At least 16 hardware accelerated 10/100/1000 Interfaces (RJ-45) At least 16 hardware accelerated GE SFP Interfaces 2x GE RJ45 Management / HA Ports Onboard Storage i.e. 2x 240GB SSD Firewall should support redundant power supply IPv4 IPV6 Firewall Throughput (1518 / 512 / 64 byte, UDP) i.e. 32/32/24 Gbps Concurrent Sessions (TCP) i.e. 04 Million or greater Firewall Throughput (Packets Per Second) i.e. 36 Mpps Firewall Policies i.e. 10,000 IPsec VPN Throughput (512 byte packets) i.e. 20 Gbps SSL-VPN Throughput i.e. 4.5 Gbps Application Control Throughput i.e. 12 Gbps IPS Throughput i.e. 4 Gbps Fully managed with CLI and GUI High Availability Configurations (Active-Active, Active-Passive, Clustering) Content filtering Operating Temperature i.e. 32–104°F (0–40°C) Certifications(ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN, USGv6/IPv6) Form Factor (1RU) Stateful Firewall, Intrusion Prevention, Application Control User/Device Identity & Authentication, Anti-malware, Sandboxing, Web Filtering, IP Reputation, SSL Inspection, IPSEC/SSL VPN, Networking (LAN, WAN, Wi-Fi), Management & Reporting. Including all Accessories/Spares i.e Transceiver Modules 5 years Support Bundle, onsite installation, configuration, Detailed training (Bundle Certificate from manufacturer in the name of end user)	1

(Lot No.04)

Data Center Items		
Item Name	**Specification**	**Qty**

Server	2x Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit Gen10 4x16GB DDR4-2933 Memory RAID Controller 12G SAS Modular Controller 3x1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC HDD 2 x 1Gb or more Quad Ports Network Card DVD+/-RW ROM Internal/External (01 Qty) Ready Rails Sliding Rails with Cable Management Arm Dual, Hot-plug, Redundant Power Supply (1+1), 500W Form Factor 1U Rack Mount Server with 1 year warranty	2
KVM Switch	KVM Switch: 8 Port Combo KVM, switch rack mountable (PS2 and USB 1.1/2.0 support, up to 2048x1536 VGA Resolution) including 8x1.8m cable	1

Note: Next Business Day warranty will be required for the above mentioned items including UPS.